

Uncertainty Estimation Cheat Sheet for Probabilistic Risk Assessment

Abstract

"Uncertainty analysis itself is uncertain, therefore, you cannot evaluate it exactly," Source Uncertain

Quantitative results for aerospace engineering problems are influenced by many sources of uncertainty. Uncertainty analysis aims to make a technical contribution to decision-making through the quantification of uncertainties in the relevant variables as well as through the propagation of these uncertainties up to the result. Uncertainty can be thought of as a measure of the 'goodness' of a result and is typically represented as statistical dispersion.

This paper will explain common measures of centrality and dispersion; and—with examples—will provide guidelines for how they may be estimated to ensure effective technical contributions to decision-making.

Topics: Uncertainty Estimation, Probabilistic Risk Assessment

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